Responding to Disasters on Two Fronts: OFDA Rises to the Challenge of Earthquake Response and Mt. Merapi Preparedness

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In April 2006, the Mt. Merapi volcano on the Indonesian island of Java—known by locals as the "Mountain of Fire"—awoke from a four-year slumber, spewing gas and lava down its slopes. One month later, as volcanic activity continued and local residents braced for the possibility of a large, explosive eruption, a devastating earthquake struck just 45 km south of Mt. Merapi. With more than one million people affected by the earthquake and another 70,000 residents in the vicinity of the volcano facing the potential of a major eruption, addressing the vulnerabilities and meeting the humanitarian needs of these local communities was no small feat. OFDA successfully confronted the dual challenges by concurrently drawing on its robust preparedness and response capacities.

With the resurgence of activity at Mt. Merapi in April and May, OFDA actively supported the preparedness efforts of the Indonesian Red Cross (PMI). Through assistance from OFDA and other donors, PMI stocked the Mt. Merapi evacuation centers with shelter materials, blankets, and water containers to meet the immediate needs of thousands of evacuees. Anticipating and preparing to address these needs proved essential; depending on the level of risk day-to-day, between 4,000 and 20,000 nearby residents evacuated to PMI centers in April and May.

An OFDA shelter specialist examines earthquake-damaged buildings in Indonesia (Alfred Nakatsuma, USAID).

To assist local scientists at the Mt. Merapi Observatory in monitoring continued fluctuations in volcanic activity, USAID deployed a team of U.S. Geological Survey (USGS) volcanologists through its Volcano Disaster Assistance Program. The USGS team noted that the volcano was unusually unpredictable, posing challenges to local officials and the humanitarian community in anticipating a major eruption. To better understand the risks to different communities, the team developed a probability tree quantifying the likelihood of different eruption scenarios—information that was considered in preparedness activities. The USGS team also provided enhanced instrumentation for monitoring the volcano.

When a Disaster Assistance Response Team (DART) deployed to the region in response to the May 27 earthquake, the team incorporated planning for a major eruption at Mt. Merapi into earthquake response activities. To this end, USAID redeployed a USGS volcanologist as part of the DART to provide further technical assistance in monitoring the volcano. In addition, the DART built in a measure of flexibility to earthquake response grants, enabling partners to quickly respond if a major volcanic eruption occurred. OFDA supported the development of emergency radio broadcasts to reach earthquake-affected communities with key messages during the rebuilding phase. These broadcasts were also designed to warn residents of an impending volcanic eruption.

In early June, Mt. Merapi was at the highest level of alert when an avalanche of volcanic material and gas flowed 7 km down the southeastern side of the volcano. As a result of ongoing early warning and preparedness measures, local populations had become adept at evacuating on short notice, and, with OFDA assistance, evacuation centers were better poised to meet the humanitarian needs of evacuees. The avalanche reached a nearby village, but all of the residents were safely sheltering in evacuation centers.

The threats posed by the Mt. Merapi volcano and earthquakes in general are unlikely to diminish in the near future. However, with a proven arsenal of preparedness and response measures, OFDA is well positioned to proactively identify and respond to multiple disasters in the same location. Given the myriad of potential hazards facing communities in Indonesia and elsewhere across the globe, OFDA's ability to engage its preparedness and response capacities, often in tandem, is a proven asset in saving lives and reducing the devastation caused by disasters.

Mt. Merapi's smoke and ash cast a shadow over nearby towns and villages (Aquaya Institute).